

# EUROPEAN PATENT OFFICE

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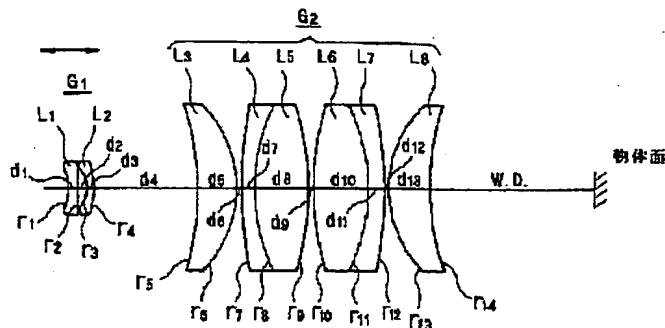
APPLICATION DATE : 22-10-93  
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APPLICANT : MITSUTOYO CORP;

INVENTOR : ARISAWA KATSUYOSHI;

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TITLE : SCANNING OBJECTIVE LENS



ABSTRACT : PURPOSE: To provide a retro-focus type scanning objective lens in which aberration is corrected over a wide scanning range.

CONSTITUTION: The scanning objective lens consists of a first lens group G1 having negative refracting power and a second lens group G2 having positive refracting power. The G1 is formed out of concave meniscus lenses L1, L2, and the G2 is formed out of a composed lens consisting of a convex meniscus lens L3, a concave meniscus lens L4 and a convex lens L5, and a composed lens consisting of a convex lens L6, a concave meniscus lens L7, and a convex meniscus lens L8. When the focus distances of the G1 and G2 are  $F_1$ ,  $F_2$ , the refraction index of L1, L2 is  $N_1$ , the refraction index of L3 and L8 is  $N_{2p}$ , the refraction index of L4, L7 is  $N_{2cn}$ , and the refraction index of L5, L6 is  $N_{2cp}$ , expressions of  $N_1 > 1.6$ ,  $N_{2p} > 1.6$ ,  $N_{2cn} - N_{2cp} > 0.2$ ,  $2 < |F_1| < 10$ , and  $2 < |F_2| / |F_1| < 6$  are satisfied.

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